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BLOOD PUMPING SYSTEM 4® (BPS4)

USER MANUAL

1025882, 1025878, 1025873 ,1025869

BLOOD PUMPING SYSTEM 4® (BPS4)

The STOPS Medical Blood Pumping System 4® (BPS4) is a medical training system designed to simulate human hemorrhage with pulsatile flow and adjustable pressure in conjunction with simulated human injury products.

This manual is intended to allow users to perform a pre-operational inventory and inspection to employ STOPS Medical BPS4. Also enclosed are post operation service and maintenance procedures. Adherence to these procedures will ensure years of optimal performance.

> COMPONENTS

1. Protective pump housing (includes the following items):
 - a. Electric pump
 - b. Pressure control
 - c. Pulse on/off
 - d. Pump intake hose
 - e. Wireless remote receiver
2. Custom made backpack storage/carry system
3. 3-liter liquid bladder
4. 4 Removable extension tubes
5. 2 Wireless remote fobs
6. 2 – 12 V LITHIUM-ION battery
7. Battery charger
8. Battery service and maintenance guide

> SPECIFICATIONS

Capacity:	3 liters
Flow rate:	Empty bladder in 2:14 (no pulse) Empty bladder in 2:14 (with pulse)
Battery life:	2 hours of continuous operation (no pulse) 1.5 hours of continuous operation (with pulse)
Power:	12 V, 1.5 A/Hr. rechargeable LITHIUM-ION battery
Dimensions:	19 x 8 x 4.5 in (48.3 x 20.3 x 11.4 cm)
Wireless range:	50 ft (15.2 m)

> PRE-OPERATIONAL SERVICE CHECK (STANDARD SYSTEM)

- Plug the battery into its port. Make sure it is fully seated.
- Press the “On” button on the remote to check if the pump activates.
- Adjust the pressure as needed.
- Press the “Off” button to turn off the pump.
- Remove battery.



NOTE:

Do not run the pump dry for more than 10 seconds during system check, as this can cause severe damage to the pump.

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> TO MAKE THE SYSTEM READY FOR SERVICE:

- Complete the inventory and pre-operational service check.
- Attach the bladder to the pump and fill it completely with simulated blood.
- Close the bladder lid securely, avoiding trapped air. Ensure it is not cross-threaded or overtightened.
- Connect extension tube(s) to intended bleeding product or prosthetic.
- Run the pump briefly to purge air, then adjust flow to the desired level.
- Turn off the pump until use.

> TO OPERATE THE SYSTEM:

- Press the “**On**” button on the remote fob to begin flow.
- Adjust the Pressure knob to achieve the desired flow.
- Turn on the pulse if a pulsatile flow is desired.
- To stop, press the “**Off**” button on the fob.

There are two ways to turn the pump on and off:

1. Remote fob on/off buttons.
2. Pump power button.



NOTE:

If you turn the pump on with the power button, you must also turn it off with the power button.

> POST-OPERATION SERVICE AND MAINTENANCE:

- Remove the pump and bladder from the backpack.
- Empty the bladder by running the system until no liquid remains.
- Fill the bladder with warm water and run the system (with pulse activated) until the bladder is empty. Repeat this process at least twice, or until the water runs completely clear with no trace of red.



NOTE:

Most pump failures occur when blood substitute is not flushed properly and dries inside the pump.

- Disconnect extension tubes and shake out excess water.
- Remove both batteries and place them on charge.



NOTE:

For long battery life, always store them fully charged. Remove batteries whenever the system is not in use.

- Clean the pump housing with damp cloth, then hand dry all components.
- Hang the bladder upside-down with the lid open to air dry completely.
- If the backpack gets stained, wash it by soaking in cold water and gently shaking it. Let it air dry. **Do not use warm water**, as it can set the stains.
- Once dry, return all components to their designated places in the backpack and close all zippers.

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> CONTACT INFORMATION



3B Scientific

A worldwide group of companies

3B Scientific GmbH

Ludwig-Erhard-Straße 20 • 20459 Hamburg • Germany

Phone: + 49 (0)40-73966-0 • Fax: + 49 (0)40-73966-100

3bscientific.com • info@3bscientific.com